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- All the global data sources used in Chapter 2 are listed in Table 2.1;
- "Monthly Ocean Briefing" slides from the Climate Prediction Center, at <http://www.cpc.ncep.noaa.gov/products/GODAS>;
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- Moored ocean data is distributed by NOAA/PMEL at <http://www.pmel.noaa.gov/tao>;
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- AVISO gridded altimetry is produced by SSALTO/DUACS and distributed with support from CNES, at <http://www.aviso.oceanobs.com/>;
- Analyses of altimetry-derived surface currents are available at <http://www.aoml.noaa.gov/phod/altimetry/cvar>;
- Atlantic Meridional Overturning Circulation estimates from the Rapid-MOC/MOCHA/WBTS program are available at http://www.noc.soton.ac.uk/rapidmoc/rapid_data/rapid_transports.html;
- The Florida Current Transport time series is available through the NOAA Western Boundary Time Series Program at http://www.aoml.noaa.gov/phod/floridacurrent/data_access.php;

- U.S. CLIVAR/CO2 Repeat Hydrography Program at <http://ushydro.ucsd.edu/>;
- NOAA Hurricane classification at http://www.cpc.noaa.gov/products/outlooks/background_information.shtml;
- Tropical Cyclone Heat Potential and related products at <http://www.aoml.noaa.gov/phod/regsatprod/atln/index.php>;
- Global ocean surface ocean CO₂ levels from SOCAT at <http://www.socat.info/> and <http://cwcgom.aoml.noaa.gov/erddap/griddap/aomlcarbonfluxes.graph>;
- Sea-viewing Wide-Field-of-view Sensor (SeaWiFS) Ocean Color at <http://oceancolor.gsfc.nasa.gov/REPROCESSING/R2009/>;
- NOAA snow extent data record derived from optical satellite imagery at <http://climate.rutgers.edu/snowcover/>;
- Integrated Global Radiosonde Archive at <http://www.ncdc.noaa.gov/oa/climate/igra/>;
- Daily surveys of Greenland ice sheet marine terminating outlet glaciers from cloud free Moderate Resolution Imaging Spectroradiometer (MODIS) visible imagery at <http://bprc.osu.edu/MODIS/>;
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APPENDIX: ACRONYMS

A	Anticyclonic days
AAO	Atlantic Oscillation
ACC	Antarctic Circumpolar Current
ACE	NOAA's Accumulated Cyclone Energy Index
AEJ	African Easterly Jet
AGCM	Atmospheric general circulation model
AGGI	NOAA's Annual Greenhouse Gas Index
AMIP	Atmospheric Model
AMJ	Intercomparison Project
AMO	April–May–June
AMSR-E	Atlantic Multidecadal Oscillation
AMSU	Advanced Microwave Scanning Radiometer for Earth Observing System
ANEEL	Advanced Microwave Sounding Unit
AO	Agência Nacional de Energia Eléctrica
AOD	Arctic Oscillation
AOML	Aerosol optical depth
AR4	Atlantic Oceanographic and Meteorological Laboratory
ASAR	Meteorological Laboratory
ASO	Fourth Assessment Report
ASTER	Advanced Synthetic Aperture Radar
ATLAS	August–September–October
AVHRR	Advanced Spaceborne Thermal Emission and Reflection Radiometer
AVISO	Autonomous Temperature Line Acquisition System
BC	Advanced Very High Resolution Radiometer
BGOS	Advanced Spaceborne Thermal Emission and Reflection Radiometer
BI	Archiving, Validating, and Interpretation of Satellite
Br	Oceanographic data
C	British Columbia
CALIPSO	Beaufort Gyre Observing System
CAMS	Balleny Islands
CAPE	Bromine
CERES	Cyclonic days
	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation
	Climate Anomaly Monitoring System
	Convective Available Potential Energy
	Clouds and the Earth's Radian Energy System

CFC	Chlorofluorocarbon	EOF	Empirical orthogonal function
CFC-11	Trichlorofluoromethane	EOS	Earth Observatory System
CFC-12	Dichlorodifluoromethane	ERB	Earth Radiation Budget
CH_4	Methane	ERBE	Earth Radiation Budget
Chl_{sat}	Surface-layer chlorophyll concentration	EERSST, v3b	Experiment Extended Reconstructed Sea Surface Temperature, version 3b
CIIFEN	International Research Center on El Niño	ESA	European Space Agency
Cl	Chlorine	ESRL	Earth System Research Laboratory
CLIVAR	Climate Variability and Predictability	EU	European Union
CMA	China Meteorology Administration	FAO	Food and Agriculture Organization
CMAP	Climate Prediction Center (CPC)	FAPAR	Fraction of Absorbed Photosynthetically Active Radiation
CMC	Merged Analysis of Precipitation	FLASHflux	Fast Longwave and Shortwave Radiative Fluxes
CMIP	Canadian Meteorological Centre Coupled Model Intercomparison Project	FWC	freshwater content
CNES	Centre National d'Etudes Spatiales	GCM	General circulation model
CO	Carbon monoxide	GCOS	Global Climate Observing System
CO_2	Carbon dioxide	GEOSECS	Geochemical Ocean Section Study
CONAFOR	National Forestry Commission, Mexico	GHA	Greater Horn of Africa
GHCN		GHCN	Global Historical Climatology Network
CPC	Climate Prediction Center	GIA	Glacial isostatic adjustment
CPHC	NOAA's Central Pacific Hurricane Center	GIMMS	Global Inventory Modeling and Mapping Strides
CPTEC	Center for Weather Forecasting and Climate Studies	GISS	NASA's Goddard Institute of Space Studies
CRU	Climate Research Unit	GMD	Global Monitoring Division
CSI	NOAA Climate Scene Investigation	GMSL	global mean sea level
CTD	Conductivity, Temperature, Depth	GOME	Global Ozone Monitoring Experiment
CYC	Cyclone	GPCC	Global Precipitation Climatology Centre
DIC	Dissolved inorganic carbon	GPCP	Global Precipitation Climatology Project
DISC	Data and Information Services Center	GPI	Genesis potential index
DJF	December–January–February	GRACE	Gravity Recovery and Climate Experiment
DMSP	Defense Meteorological Satellite Program	GRDC	Global Runoff Data Centre
DOE	Department of Energy	Gt	gigaton
DU	Dobson units	GTSPP	Global Temperature and Salinity Profile Project
DWBC	Deep western boundary current	H	Hurricane
DWD	Deutscher Wetterdienst	HadAT	Hadley Centre's radiosonde temperature product
EBAF	Energy Balanced and Filled	HadCRUT3	Hadley Centre/CRU gridded monthly temperatures dataset
ECl	Equivalent chlorine	HadGEM1	Hadley Centre global model
ECMWF	European Centre for Medium-Range Weather Forecasts	HCFC	Hydrochlorofluorocarbon
ECV	Essential Climate Variable	HFC	Hydrofluorocarbon
EECI	Effective equivalent chlorine	HIRS-W	High Resolution Infrared Sounder
EESC	Effective equivalent stratospheric chlorine		
EKE	Eddy kinetic energy		
ENP	Eastern North Pacific (basin)		
ENSO	El Niño–Southern Oscillation		

hPa	Hectopascal (1 mb)	MM5	Fifth-generation Pennsylvania State University–National Center for Atmospheric Research Mesoscale Model
ICPAC	IGAD Climate Prediction and Applications Centre		
IGY	International Geophysical Year		
INPE	National Institute for Space Research, Brazil	MOC MOCHA	Meridional overturning current Meridional Overturning
INSTAAR	Institute of Arctic and Alpine Research	MODIS	Circulation Heat Transport Array Moderate Resolution Imaging
IO	Indian Ocean		Specroradiometer
IOD	Indian Ocean dipole	MOPITT	Measurements of Pollution in the Troposphere
IODE	eastern pole of the Indian Ocean Dipole	MSLP	mean sea level pressure
IPCC	Intergovernmental Panel on Climate Change	MSU MTSAT	Microwave Sounding Unit Multifunctional Transport Satellites
IPCC AR4	IPCC Fourth Assessment report (published in 2007)	N ₂ O	Nitrous oxide
IR	Infrared	NAM	Northern annular mode
IRIMO	Islamic Republic of Iran Meteorological Organization	NAMOS	Nansen and Amundsen Basin Observational System
ISCCP	International Satellite Cloud Climatology Project	NAO NARR	North Atlantic Oscillation North American Regional Reanalysis
ITCZ	Intertropical convergence zone		
IUK	iterative universal Kriging	NASA	National Aeronautics and Space Administration
JAS	July–August–September		
JASO	July–August–September–October	NCAR	National Center for Atmospheric Research
JFM	January–February–March		
JGOFS	Joint Global Ocean Flux Study	NCDC	National Climatic Data Center
JJA	June–July–August	NCEP	National Center for Environmental Prediction
JMA	Japanese Meteorological Agency		
JPL	Jet Propulsion Laboratory	NDVI	Normalized difference vegetation index
JRA	Japanese Reanalysis		
JTWC	U.S. Navy's Joint Typhoon Warning Center	NEM NERC	Northeast monsoon National Environmental Research Council
KNMI	Royal Netherlands Meteorological Institute	NH	Northern Hemisphere
LaRC	Langley Research Center	NHC	National Hurricane Center
LHF	Latent heat flux	NIFC	National Interagency Fire Center
MAM	March–April–May	NIO	Northern Indian Ocean
MBT	mechanical bathythermograph	NOAA	National Oceanic and Atmospheric Administration
MCYC	Major cyclone		
MDR	Main Development Region	NOMADS	National Operational Model
MEI	Multivariate ENSO Index		Archive and Distribution System
MERIS	Medium Resolution Imaging Spectrometer	NPEO	North Pole Environmental Observatory
MH	Major hurricane	NPP	Net primary production
MISR	Multiangle Imaging SpectroRadiometer	NRTSI	Near Real-Time SSM/I Plar Gridded Sea Ice Concentrations
MJO	Madden–Julian oscillation	NS	Named storm
MLO	Mauna Loa Observatory	NSIDC	National Snow and Ice Data Center
MLS	Microwave Limb Sounder	NSW NWS	New South Wales, Australia National Weather Service
		O ₃	Ozone

OAFux	Objectively Analyzed Air–Sea Fluxes	SCIAMACHY	Scanning Imaging Absorption Spectrometer for Atmospheric Chartography
ODGI	Ozone Depleting Gas Index		
OH	Hydroxide anion	SCS	South China Sea
OHCA	Ocean Heat Content Anomaly	SD	snow depth
OI	Optimal interpolation	SeaWiFS	Sea-viewing Wide Field of View
OISST, v2	Optimal Interpolation SST, version 2	SF ₆ SH	Sulfur hexafluoride Southern Hemisphere
OLR	Outgoing longwave radiation	SHF	Sensible heat flux
OMI	Ozone Monitoring Instrument	ΣChl	Photic zone chlorophyll
ONI	Oceanic Niño Index	SIO	Southern Indian Ocean
OPI	OLR precipitation index	SL	Sea level
OSCAR	Ocean Surface Current Analysis–Real Time	SLP	Sea level pressure
PATMOS (-x)	Pathfinder Atmospheres (Extended Product)	SMMR	Scanning Multichannel Microwave Radiometer
pCO ₂	Carbon dioxide partial pressure	SOBS	surface weather observations
PDO	Pacific decadal oscillation	SOI	Southern Oscillation index
Pg	Petagram (1015 g)	SON	September–October–November
PIRATA	Pilot Research Array in the Tropical Atlantic	SPCZ	South Pacific convergence zone
PMEL	Pacific Marine Environmental Laboratory	SPOT	VGT satellite
PNG	Papau New Guinea	SRES	Special Report on Emissions Scenarios
PO.DDAC	Physical Oceanography Distributed Active Archive Center	SSALTO/DUACS	Segment Sol Multimission Altimetry and Orbitography/Developing Use of Altimetry for Climate Studies
ppb	Parts per billion	SSM/I	Special Sensor Microwave Imager
ppbv	Parts per billion by volume	SSS	Sea surface salinity
ppm	Parts per million	SST	Sea surface temperature
ppt	Parts per trillion	SSTA	Sea surface temperature anomaly
PSC	Polar stratospheric cloud	SSU	Stratosphere Sounding Units
PSS	Practical salinity scale	STAR	Center for Satellite Applications and Research
PT	total precipitation	STY	Supertyphoon
QBO	Quasi-biennial oscillation	Sv	Sverdrups ($1 \text{ Sv} \equiv 10^6 \text{ m}^3 \text{ s}^{-1}$)
QuikSCAT	Quick Scatterometer	SWI	Summer warmth index
RAMA	Research Moored Array for African-Asian-Australian Monsoon Analysis Prediction	SWP	Southwest Pacific
RAOB CORE	Radiosonde Observation Correction	TAO	Tropical Atmosphere Ocean
RATPAC	Radiosonde Atmospheric Temperature Products for Assessing Climate	TATL	Tropical Atlantic
		TC	Tropical cyclone
		TCHP	Tropical cyclone heat potential
		TCWV	Total Column Water Vapor
RICH	Radiosonde Innovation Composite Homogenization	TD	Tropical depression
		TI-NDVI	time-integrated NDVI
RSMC	Regional Specialized Meteorological Center Tokyo	TLT	temperature of the lower troposphere
RSS	Remote Sensing Systems	TMI	Tropical Rainfall Measuring Mission
SAM	Southern annular mode		Microwave Imager
SAT	surface air temperature	TOA	top of atmosphere
SBUV	Solar Backscatter Ultraviolet	TOMS	Total Ozone Mapping Spectrometer
SCD	snow covered duration	TRMM	Tropical Rainfall Measuring Mission
SCE	snow cover extent	TS	Tropical storm

TSP	Thermal state of permafrost
TW	trade winds
TY	Typhoon
UAH	University of Alabama Huntsville
USD	U.S. Dollars
USGS	U.S. Geological Survey
VasClimO	Variability Analysis of Surface Climate Observations
VOCALS	VAMOS (Variability of the American Monsoon Systems)
	Ocean–Cloud–Atmosphere–Land Study
WBC	Western boundary current
WGMS	World Glacier Monitoring Service
WHOI	Woods Hole Oceanographic Institute
WMO	World Meteorological Organization
WNP	western North Pacific (basin)
WOA	<i>World Ocean Atlas</i>
WOCE	World Ocean Circulation Experiment
WPO	west Pacific Ocean
XBT	Expendable bathythermograph

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